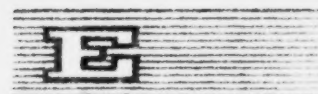




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PRIORITIES FOR IMPROVING BASIC ECONOMIC STATISTICS

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PRIORITIES FOR IMPROVING BASIC ECONOMIC STATISTICS

Introduction

1. In many African countries, the availability of basic economic statistics falls far short of what is desirable or even essential for rational policy making and economic management. This is evidenced, for example, by the absence of up-to-date estimates of economic growth and of the basic data required to make such estimates quickly and reliably.

2. There are perhaps two complementary ways of defining the term "basic economic statistics". From the point of view of the average user, basic economic statistics might be defined as those which he or she could reasonably expect to find readily available in up-to-date publications (such as a national statistical bulletin or abstract). Such figures should provide an appreciation of the main structure and recent development of the economy. The second way, from the statistician's point of view, is to define basic economic statistics as those basic data collection programmes that are needed to generate the published information and to meet users' requirements at a basic level.

3. In this paper, the requirements for basic economic statistics are briefly outlined and the implications for their collection discussed with particular reference to business surveys. A distinction is made between the collection of data to measure up-to-date developments and that required for structural analysis. The methodology and hence the basic data requirements for measuring economic growth is discussed and some conclusions drawn.

Requirements for basic economic statistics

1. In these times of economic difficulty, the needs of those responsible for managing economic recovery and/or adjustment programmes are perhaps the most important. Often these programmes will be concerned with the generation of foreign exchange, to pay for essential imports and to repay loans; with the production and financing of export commodities; with pricing and exchange rate policies; with food production and agro-industries; and with the operations of public enterprises and of the government itself. The basic data required to monitor developments in these fields will mainly be in the form of time series and concern the formal sector of the economy.

5. More wide ranging is the suggested list of statistical indicators intended for monitoring Africa's Priority Programme for Economic Recovery. This has been set out in another document (E/ECA/PSD.5/14). Many of these indicators would come under the heading of basic economic statistics.

6. These requirements are mainly for time-series data. They include particularly those variables which play a key role in the economy and which are highly volatile and difficult to predict. A certain amount of structural data is also necessary. However, more detailed data, such as input/output tables for example, may be considered as outside the scope of basic statistics, as they are only needed for more sophisticated and specialised analysis.

7. Of course, every country will have different needs and priorities according to its particular situation. It is however possible to make a list of major requirements which might apply to most countries. These requirements are discussed briefly below under the following main headings:

- a) prices and exchange rates
- b) major productive activities
- c) employment and earnings; the economically active population
- d) government revenue and expenditure
- e) external trade and balance of payments
- f) money and banking; public sector borrowing; debt
- g) national accounts (basic level)
- h) living standards (household consumption)

This list of course excludes basic data on the demographic, social and environmental conditions of a country, which complement the economic data.

8. **Prices and exchange rates:** Consumer prices are probably the first priority for any statistical office. Apart from monthly or quarterly indices for each major group, it is useful to have annual averages for a detailed list of commodities. Agricultural prices are also most important, particularly in the context of monitoring food supplies, as well as for evaluating agricultural production. Export and import prices and exchange rates should be available. Other prices associated with production, such as building costs, are also important. Wage rates might be included in this category.

9. **Major productive activities:** In almost all African countries agriculture is the most important activity. It is also sensitive to climatic conditions, pricing policies, etc. Regular up-to-date estimates of crop production are therefore crucial for many purposes. Figures on livestock are also needed, although

they will usually be less crucial than those for major crops. Data on forestry and fishery production will also be needed if these activities are important. In the case of industrial enterprises, the economic health of the largest firms are of prime importance to the whole economy from the point of view of employment, export earnings, government revenue, etc. The monitoring of the output of these large producers must therefore have high priority. Construction activity can be particularly volatile and affects employment, incomes and hence the rest of the economy. Basic data on energy supplies are required. Then there are hotel and other tourism statistics; air, sea and land transport; communications; insurance and other services of economic importance. In all these sectors, measures of profitability might be considered important for policy purposes.

10. **Employment and earnings; the economically active population:** Although in many countries "formal" employment is only open to a minority, there are several reasons for giving priority to its measurement. One is that it provides an easily measured indicator of formal sector activity. As mentioned above, the formal sector plays a crucial role in the economy, particularly in urban areas. Regular figures of employment in government service are especially useful. Together with assumptions on productivity, these figures are needed for estimating the output of government services which is part of gdp. Summary data, derived from population censuses or surveys of the economically active population, on the structure of the labour force might also be considered as a basic statistical requirement.

11. **Government revenue and expenditure:** The IMF system of Government Finance Statistics (GFS) provides a framework for presenting data on government revenue and expenditure. Summaries of this, in time series form, would be included as basic economic statistics.

12. **External trade and balance of payments:** Again, annual summaries of external trade and the balance of payments must be considered as basic. Monthly data on major exports are likely to be needed. Imports are usually classified by main SITC sections. Much more useful for economic analysis is a classification by broad economic categories (BEC), although this requires adaptation to the particular circumstances of each country.

13. **Money and banking; public sector borrowing; debt:** These data, together with details of interest rates, will be considered indispensable by the authorities concerned with monetary and financial management, and provide essential background information for the general economist.

14. **National accounts (basic level):** Estimates of value added by kind of activity, at current and at constant prices, provide an overview of the structure and development of the economy. Many users, particularly macro-economic planners, would also consider estimates of the expenditure components of gdp to be essential. When balance of payments data are added, the four main summary accounts of the nation (as defined in the UN System of National Accounts) can be obtained, showing national income, saving and net borrowing from abroad.

15. **Living standards (household consumption):** Finally in the field of economic statistics, data on the distribution and structure of household consumption might be included as basic. This would provide information on the living standards of the population at large and could be used to analyse the effects of policy options on those standards.

The timeliness of the data

16. When examining the development of the economy over time, most users want data that is as up-to-date as possible. They want to know what is happening now, and preferably what will happen next year. What happened up to the year before last is of relatively little interest, particularly if the user knows that situation will have changed substantially since then.

17. Thus there is little value in monthly time series if the data are not available within six months at the outside. There is very little value in quarterly figures if they take more than a year to produce. Ideally, regular data of this type should be available before the end of the period following the one to which they relate.

18. In some countries, the need for regular up-to-date data is met by means of a "tableau de bord". This is a quarterly or six-monthly set of data designed to measure the economic pulse. In addition to actual figures it may include short-term projections based on surveys of business intentions etc.

19. On the other hand, good structural data can have a more lasting value and may very well be relevant for several years after the reference period. Rather than repeating expensive data collection exercises too frequently, projecting the benchmark data in line with known control totals will often produce estimates which are perfectly adequate for most purposes. Of course, there comes a time - perhaps after five years, depending on the situation - when the structural data becomes out of date and a new survey becomes essential. A reasonable balance between too much data and too little is often hard to achieve.

Implications for data collection

20. In the field of basic economic statistics, therefore, two types of data can be distinguished. The first type measures development over time: indicators in the form of monthly, quarterly or annual time series. The second type describes structural characteristics. The distinction can be seen most clearly in the data required to produce a consumer price index. Structural data is needed to obtain the weights, while regular price surveys are required to calculate the price relatives.

21. There are considerable dangers in trying to collect both types of data at once, especially in the context of business surveys. Undertaking a series of enquiries that are both too complex and too frequent often leads to failure, especially in terms of the need for timely overall indicators.

22. The problem with business enquiries, in any country, is that few (if any) businessmen are prepared to devote their time to the completion of government returns, especially if these are complex, difficult to undertake and require more than a few minutes to complete. The same is regrettably often the case with government departments unless there is very strong backing from the top. Realistically, therefore, Statistical Offices must make their requirements for data as simple as possible, especially if the survey is to be repeated at frequent intervals. Otherwise the problem of non-response will become intractable. To be reasonably reliable, a business survey must achieve a response rate of at least 80 per cent.

Short-period enquiries

23. For the purpose of obtaining up-to-date indicators of activity in the formal sector, monthly or quarterly surveys are necessary. Even a six-monthly survey might be suitable particularly for obtaining data on intentions. The most effective return is one that simply requests information on such items as

- total number of employees,
- total vacancies,
- volume of production or sales,
- total value of sales,
- total capital expenditure,
- value of orders, and
- investment intentions.

Such simple data can be collected without much difficulty in many countries by telephone. This method is well worth considering, especially when postal delays are likely. It should also be possible to collect simple data from the informal sector at regular intervals on a sample basis.

24. The temptation to seek any breakdown should be strongly resisted in these surveys. The more questions there are, the more likely the respondent will be unable to answer quickly; response will suffer and so will the reliability of the results. The data processing also becomes more complicated. It is also necessary to keep the sample size in line with the resources available, to ensure that the data is produced according to a strict timetable. The frequency of the survey must also be carefully considered: monthly figures may not be much more useful than quarterly data, but to compile them involves three times as much work.

25. In these surveys the objective is to identify changes in the level of activity, etc and not to measure the level itself. The surveys must therefore be designed and processed in a way that ensures comparability from period to period. More comprehensive benchmark surveys are required to establish levels from time to time. These may result in a need to adjust the estimates based on the short-period surveys.

Annual and benchmark surveys

26. At least in the formal sector, it is accepted practice for businesses to produce commercial accounts on an annual basis. In many Francophone countries this is done according to the OCAM accounting plan, and detailed returns are made for both fiscal (tax) and statistical purposes. This kind of link with another administrative procedure is clearly advantageous, but there may still be problems, particularly in processing the returns. In other countries, businesses are required to make separate returns to the statistical office.

27. Although the returns often require considerable detail, very little of this detail is actually published or used, if indeed it is ever tabulated. Again, the returns should be designed so that the most essential information can be obtained while at the same time making it as easy as possible for the form filler.

28. Processing detailed business surveys has long been a serious bottleneck. In many countries the only realistic method has been hand tabulation. The advent of powerful micro-computers should ease the situation. Even so, there is often an unwillingness on the part of the statisticians to get involved in the processing as well as a shortage of skilled programmers. A statistician who is willing and able to prepare the processing system himself is worth two or three that are not. It is recommended that no newly designed return is dispatched until the processing system is ready to operate. Tables should be produced on the basis of a small pilot before the return is finalised for use. This procedure will enable redundant information to be identified and eliminated from the return before the survey begins; it will also ensure that the results are not delayed for want of programmes.

29. It is more difficult to obtain data from the informal sector, for which there is unlikely to be a complete register of establishments and for which conventional business surveys do not yield any results. Fortunately, outside agriculture, this sector does not generally have the same impact on the overall economy as the formal sector and is usually less sensitive to external factors. It is therefore right to give priority to the formal sector first.

30. Nevertheless benchmark data on the informal sector are often needed, for example to assess the effects of developmental and other policy measures. However, it is probably better to obtain this kind of data through special studies on a relatively small scale than through large scale exercises. Because of the sensitive nature of the data, the use of large numbers of enumerators of variable quality is certain only to produce large quantities of unusable data which are quite impossible to make sense of. It is far better to carry out a small study in closely controlled conditions, using a very few highly-skilled enumerators, which yields no more data than the statistician in charge can scrutinise, edit and analyse by himself.

Business registers and stratification

31. Outside the agricultural sector, there is probably no more important factor in the growth or decline of an economy than the starting up or closing down of businesses. An accurate, up-to-date register, at least of formal sector businesses, is therefore fundamental to the monitoring of economic development. Such a register is also needed by other departments, for example for taxation or, in some countries, social security reasons. These departments may maintain staff whose main task is to identify businesses. It is advantageous if all departments requiring a business register co-operate to maintain it.

32. In many countries, such co-operation between departments is weak. This results in unnecessary and inefficient duplication of work. Leadership, determination and good relationships between officials at an informal level are important in bringing departments together. To maintain a good register it may be necessary to work through the provincial, district or local administrations. In some countries it may be worth initiating a special project both to set up and to maintain a complete register of businesses. But to be really effective it must have the support of all user departments, especially the revenue departments.

33. Unlike households whose size is always relatively limited, the largest business may be more than a thousand times larger

than the smallest. As there is no possibility of covering every business in every survey, stratification of businesses by size is absolutely essential. Employment size (or number of employees) is the simplest and the best general indicator of size. It does not have to be 100 per cent accurate for stratification purposes.

34. Three main strata can be envisaged. The first would contain the relatively small number of enterprises which are so large that their omission would invalidate the results of the survey. These enterprises may employ several hundred people each. The middle stratum might be the remainder of the formal sector, the precise definition of which may vary according to circumstances. These businesses might be further divided into sub-strata by size, or they might be sampled with probability proportional to size. The third main stratum would cover informal businesses and household activities, for which it is probably not possible to maintain a complete business register, just as it not possible to maintain a complete list of farmers.

Estimating economic growth

35. There is a very considerable demand for estimates of economic growth that are both timely and reliable. Usually attention is focussed on gdp and its components at constant prices. (Gdp at constant prices measures the change in the volume of production. This is not necessarily the same as changes in real income, which depend also on changes in the terms of trade.)

36. Unfortunately, however, such estimates are often unreliable and out of date. Clearly there will always be a conflict between reliability and timeliness, but there is much statistical offices could do to achieve an improvement in both, without undue cost.

37. First of all it is necessary for the statisticians concerned to drop any over-adherence to conceptual purity in the compilation of the estimates. Generally speaking, the best way to construct estimates of gdp by kind of activity at constant prices is simply to project forward base-year value added using volume indicators of gross output. This is an approximation to what is ideally required according to theory, but it is a very good approximation. It depends on a fraction of the theoretical data requirements, which are in most cases far beyond the capacities of national statistical offices to collect.

38. This method is used in most developed countries, which is why they are able to produce estimates quickly. It is precisely equivalent to the method commonly used to produce an index of industrial production (in which volume indicators are weighted by value added). It is analogous to the production of a price index, except that the result is a volume index.

39. Unfortunately, strict adherence to the theory of so-called "double deflation" has not only delayed the estimates in some countries but actually rendered them quite unreliable. This is because the method can be extremely sensitive to relatively small errors or the use of data that is not precisely appropriate. The more straightforward direct deflation of value added at current prices can also be unreliable. Any deflation should normally be applied to the total value of output so as to derive the appropriate volume indicator. These issues have been dealt with more fully in guidelines prepared for the recent ECA working group on national accounts at constant prices.

40. Once the simplified methodology is accepted as appropriate, the main problem is to identify volume indicators that are appropriate to the output of each sector and where necessary to institute simple short-period enquiries to collect the data.

41. The various types of production data have already been described in an earlier section. In the case of wholesale and retail trade, if estimates of turnover can be obtained, these can be deflated by those parts of the consumer price index that refer to items available in shops. Otherwise, it may be necessary to assume a relationship with the volume of imports and local production.

42. In the absence of production data, regular employment figures are an acceptable alternative, possibly adjusted for assumed changes in productivity. (This method is especially common for measuring activity in the service industries.) Other proxy indicators may include the volume of inputs into a process. As a last resort and for sub-sectors which are small or which for other reasons are not priority areas for data collection, a neutral assumption would be to apply the rate of growth of the population.

43. In addition to a regular programme of enquiries aimed at obtaining up-to-date indicators, attention must be given to broader and more detailed structural enquiries with which to make benchmark estimates of value added.

44. Some countries may wish to develop a system of balanced commodity flow accounts at constant prices. Such a system provides a set of integrated and consistent data from which gdp and its components can be obtained. However, this requires a high level of skill and resources, particularly to resolve inconsistencies, and implies a level of statistical development to which very few countries in the world aspire. It should certainly not be attempted without a relatively well-developed and reliable data collection system.

Data dissemination

45. Modern information technology has opened the door to new ways of preparing data for dissemination. In particular, the use of spreadsheets on micro-computers brings many advantages. Spreadsheets combine the functions of a calculator and a typewriter with the ability to store, retrieve and amend tables. With a printer of appropriate quality, camera-ready copy can be produced from which plates can be made for printing. Even stencils can be cut with such printers, if speed and cost are more important than quality. If errors are identified they can be corrected once and for all. Typesetting errors are completely eliminated. By means of formulae, totals and percentages can be derived automatically instead of being calculated separately. Some users may prefer to receive the data on diskettes. The ability to set up computerised spreadsheets should be part of every statistician's training.

Conclusion

46. Too many countries have become bogged down in over-complex business enquiry programmes which are far too ambitious given the available resources both within the statistical office and in the business community at large. The main reasons for the failure to bring out timely and reliable results are non-response and processing problems. These problems would be reduced if the returns were simplified, the number of respondents reduced by more extensive sampling, the follow-up more vigorous and processing systems prepared in advance.

47. At the same time, regular quarterly indicators of activity, even if the coverage is strictly limited, (for example, employment in major construction companies) are often scarce. A clear distinction needs to be made between regular enquiries designed to collect indicators such as prices, total output, employment etc and those designed to collect structural data. As long as the indicators are available (it is advisable to maintain strict regular timetables for these), there should be no obligation to collect structural data every year.

48. The priority of statistical offices should thus be to ensure a regular flow of up-to-date indicators, backed up with a series of benchmark enquiries which provide the underlying framework. The demands of potential users for additional detail, as if this involved no additional cost, should be strenuously resisted unless it is quite clear that usable data will result without overloading the return. It is better to achieve more limited goals than to fail completely through over-ambitious targets.